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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/845,185	05/01/2001	Tomonori Kojima	K-1976	2548

7590 03/12/2003
KANESAKA AND TAKEUCHI
1423 Powhatan Street
Alexandria, VA 22314

EXAMINER

NGUYEN, TRAN N

ART UNIT	PAPER NUMBER
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2834

DATE MAILED: 03/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/845,185	KOJIMA ET AL.	
	Examiner	Art Unit	
	Tran N. Nguyen	2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 07 January 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 15-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 15-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 5/01/01 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. **Claim 15** is rejected under 35 U.S.C. 103(a) as being unpatentable over Itaya (US 5500994) in view of Matsumoto et al (US 5698633).

Itaya discloses a rotor for an electric motor to be arranged inside a stator (3), the rotor having: a shaft (5) at the center; a molded plastic cushioning member (31) and a permanent magnet (PM) ring (32), wherein the cushioning member is securely and integrally fixed to the permanent magnet and the rotating shaft.

Itaya substantially as the claimed invention, except for the limitations of the cushioning member formed of vulcanized and molded rubber.

Matsumoto, however, teaches that the chloroprene rubber having good processable composition and can be molded and vulcanized. Matsumoto particularly teaches that the vulcanized rubber is a good vibration damping material, which can be widely used for supports vibration generating objects.

Those skilled in the art would realize that, the Matsumoto's important teaching is the material and the usages of the vulcanized and molded rubber that has excellent vibration damping characteristics for being widely used in supporting vibrating objects.

Those skilled in the art would understand that when the Itaya's rotor is in operation, the centrifugal force of the rotor would generate vibration upon the rotor. Itaya's cushioning member which is a made of plastic. Plastic is known for its resilient, vibration damping

characteristics. However, in view of the Matsumoto's teaching, it would have been obvious to an artisan to select vulcanized and molded rubber as the material for the Itaya's cushioning member in order to enhance mechanical support for the rotor as well as withstand the generated vibration therein.

Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the Itaya's rotor structure by selecting rubber material that can be vulcanized and molded, as taught by Matsumoto, as the material of the cushioning member in the rotor assembly. Doing so would enhance the vibration damping function of the cushioning member in the rotor assembly during the rotor's operation. Furthermore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to select rubber material that can be vulcanize and molded to fabricate the rotor assembly because this would provide a suitable material to withstand the generated vibration therein, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Regarding the claimed language "*said cushioning member being vulcanized and molded between said permanent magnet and said rotating shaft as parts of molds*", this phrase in the claim recites a method steps, i.e. vulcanizing and molding the cushioning member as parts of the molds that fabricate the rotor assembly. Either the cushioning member, the shaft and the PM ring all being parts of the molds during a molding process or these three components being assembled after the cushioning member being vulcanized and molded as a separated manufacturing step would yield the same final product, i.e., the rotor assembly comprises the vulcanized and molded cushioning member being securely and integrally fixed between the permanent magnet and the rotating shaft. Thus, method of forming the cushioning member as recited in the claimed language of the rotor assembly structure is not given any patentable weight. It has been held that the method of forming the device is not germane to the issue of patentability of the device itself. (*In re Thorpe*, 227 USPQ 964, 966.) For an argumentative point of view, Itaya does discloses the cushioning member (31) being molded as part of the molds (figs 15A-15C).

2. **Claims 16-17** are rejected under 35 U.S.C. 103(a) as being unpatentable over Itaya and Matsumoto, as applied in the rejection against the base claim, and further in view of Higuchi et al (EP 633647).

Regarding claim 16, the combination of **Itaya and Matsumoto** refs substantially discloses the claimed invention, except for the added limitations of the displacement absorbing means, particularly a plurality of through holes or recesses, formed in the cushioning member in parallel with the shaft.

Higuchi, however, teaches a rubber vibration isolator (7) having a plurality of holes (7a) that would increase the surface area resulting in increasing heat dissipation area for reducing temperature, which may harden the rubber vibration. Thus, providing a plurality of through holes would increase the vibration damping rubber's duration.

Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the rotor by configuring a plurality of through holes in the body of the cushioning member, as taught by Higuchi. Doing so would enhance the vibration damping effect by improving duration of the device via air circulation.

Regarding claim 17 reciting that the displacement absorbing means formed as a plurality of recesses, the Higuchi's important teaching is that to provide vibration isolators to prevent the vibration from displacing the cushioning member and by increasing the surface area of the vibration isolator the heat dissipation would also be increase, consequently the effect of the vibration isolators, i.e., the displacement absorbing means, would also be increased.

Those skilled in the art would realize that, by applying this essential teaching of Higuchi, it would have been obvious to an artisan to increase the heat dissipating surface area by various configurations, including a plurality of recesses. Thus, by applying the Higuchi's essential teaching, it would have been obvious to one skilled in the art at the time the invention was made to modify the rotor by configuring a plurality of surface areas, such as a plurality of recess, for increasing heat dissipation thereof in order to improve duration of the device. Those skilled in the art would realize that configuring a plurality recesses, i.e., a plurality of no-through holes, instead of a plurality of through holes requires only ordinary skills in the art. It has been held that a change in size or shape is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955) (emphasis added).

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Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tran N. Nguyen whose telephone number is (703) 308-1639. The examiner can normally be reached on M-F 7:00AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703)-308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703)305-3431 for regular communications and (703)-305-3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)-308-1782.



Tran N. Nguyen

Primary Examiner

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